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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,157	10/22/2003	Kathleen B. McDermott	7383-000002/US	5882
28997	7590	06/22/2006		
HARNES, DICKEY, & PIERCE, P.L.C 7700 BONHOMME, STE 400 ST. LOUIS, MO 63105				
			EXAMINER RAMIREZ, JOHN FERNANDO	
			ART UNIT 3737	PAPER NUMBER

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/692,157	Applicant(s) MCDERMOTT, KATHLEEN B.	
	Examiner John F. Ramirez	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/07/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

After a careful review of the Election/restriction requirement dated March 28, 2006, the examiner of record has withdrawn the election/restriction. Accordingly, claims 1-27 will be prosecuted on their merits.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

On October 26, 2005, the USPTO published Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility. See: (http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf).

This guidelines details a procedure for determining patent eligible subject matter. As to claim 1, the first step in this process is whether the claims fall within one of enumerated categories. In the immediate application, the claims are drawn to a process - a "list for use in identifying a language region in the brain" - and meets this step. However, the analysis does not end here. The next step is whether a judicial exception (abstract ideas, laws of nature, natural phenomenon) is provided in the claim.

In the immediate application, claims 22-27 clearly include one of the judicial exceptions in that “list for use in identifying a language region in the brain” and the steps of “ the list includes words semantically and phonologically related” are nothing more than abstract ideas. While abstract ideas alone are not eligible, the claim as a whole must be analyzed to determine whether it is for a particular application of the abstract idea. For claims including such excluded subject matter to be eligible, the claim must be for a practical application of the abstract idea, law of nature, or natural phenomena. To satisfy the requirement of a practical application, the claimed invention must:

(1) transform an article or physical object to a different state or thing; if no transformation, then

(2) the claimed invention must produce a useful, concrete, and tangible result.

Regarding (1) above, the claims do not provide a transformation or reduction of an article to a different state or thing. Grouping equivalent dipoles based on predetermined criterion and solving inverse problems clearly do not transform an article or physical object to a different state or thing. Accordingly, one must then consider whether the claimed invention produces a useful, concrete, and tangible result.

(1) Useful Result

For an invention to be “useful” it must satisfy the utility requirement of section 101. The USPTO’s official interpretation of the utility requirement provides that the utility of the invention has to be (i) specific, (ii) substantial and (iii) credible. See MPEP 2107. It can be argued that the claim does not provide a useful result in that the claim

does not actually solve a problem. It does not appear to be specific as to how the problem is solved and, if solved, it is not specific as to the use of this solution.

(2) Tangible Result

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a 101 judicial exception, in that the process claim must set forth a practical application of that 101 judicial exception to produce a real world result.

Regarding the tangible result requirement, the claim clearly does not provide a practical application. The problem, even if solved, is not practically applied to produce a real world result. For example, once the problem is solved, how is this then applied?

(3) Concrete Result

Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. Resolving this question is dependent on the level of skill in the art. For example, if the claimed invention is for a process which requires a particular skill, to determine whether the process is substantially repeatable will necessarily require a determination of the level of skill of the ordinary skilled artisan.

Regarding the concrete result requirement, the claim does not provide a result that can be assured in that the result can not be substantially repeatable and the process can not substantially produce the same result again.

In view of the above analysis, applicant's claims 22-27 are a process which includes a judicial exception therein. Upon review of the claim as a whole, there is no transformation nor does the claim produce a useful, concrete, and tangible result. Accordingly, the claim is non-statutory

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 9, 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Klingberg et al. (US 6,463,315).

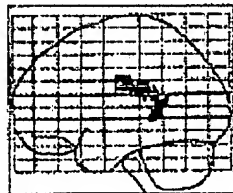


FIG. 1A

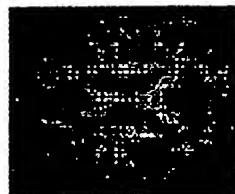


FIG. 1B



FIG. 1C

The Klingberg et al. patent discloses a method of identifying one or more language regions in the brain of a subject (see Figures 1A-C); presenting auditorily and visually to the subject one or more lists of related words to selectively challenge one or more language systems of the brain (col. 2, lines 9-25; and col. 5, lines 12-51); and scanning the brain while presenting the one or more lists with a fMRI system (see abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6, 8, 11-14 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klingberg et al. in view of Fujii et al. *Encoding-related brain activity during deep processing of verbal materials: a PET study*, and in further view of Binder et al. *Conceptual Processing during the Conscious Resting State: A Functional MRI Study*.

Klingberg et al., teaches all the limitations of the claimed subject matter except for mentioning specifically the steps of asking the subject to pay attention to relations among the words; cueing the subject as to how the words of a list are related; and presenting the words at a rate whereby the subject can comprehend the words but is challenged to pay attention to the relations, selectively challenge at least one of a semantic system and a phonological system, presenting one or more lists of

semantically and phonologically related words, alternating one or more lists of semantically related words with one or more lists of phonologically related words, recording activity in the brain while the subject processes the words, projecting data from the scan onto a surface of a structural brain image, and processing the subject words comprises that the subject says the words silently and thinks about similarity in sounds of the words.

However, the steps of asking the subject to pay attention to relations among the words; cueing the subject as to how the words of a list are related; and presenting the words at a rate whereby the subject can comprehend the words but is challenged to pay attention to the relations, selectively challenge at least one of a semantic system and a phonological system, presenting one or more lists of semantically and phonologically related words, alternating one or more lists of semantically related words with one or more lists of phonologically related words, recording activity in the brain while the subject processes the words, projecting data from the scan onto a surface of a structural brain image, and processing the subject words comprises that the subject says the words silently and thinks about similarity in sounds of the words are considered conventional in the art by the teachings of Fujii et al. and Binder et al.

The Fujii et al. reference on pages 430-432 (Materials and Methods) teaches the steps of asking the subject to pay attention to relations among the words; cueing the subject as to how the words of a list are related; and presenting the words at a rate whereby the subject can comprehend the words but is challenged to pay attention to the relations, selectively challenge at least one of a semantic system and a phonological

system, presenting one or more lists of semantically and phonologically related words, alternating one or more lists of semantically related words with one or more lists of phonologically related words, recording activity in the brain while the subject processes the words, and processing the subject words comprises that the subject says the words silently and thinks about similarity in sounds of the words.

Moreover, the Binder et al. reference in pages 81-83 (Table 1) discloses the steps of asking the subject to pay attention to relations among the words; cueing the subject as to how the words of a list are related; and presenting the words at a rate whereby the subject can comprehend the words but is challenged to pay attention to the relations, projecting data from the scan onto a surface of a structural brain image.

Based on the above observations, for a person of ordinary skill in the art, modifying the method disclosed by Klinberg et al., with the above discussed enhancements would have been considered obvious because such modifications would have resulted in significantly better recognition performance associated with activation of various brain areas.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

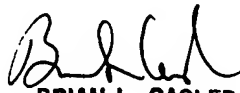
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John F. Ramirez whose telephone number is (571) 272-8685. The examiner can normally be reached on (Mon-Fri) 7:30 - 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JFR
05/16/06


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